Montana Department of ENVIRONMENTAL QUALITY

ENFORCEMENT DIVISION

CLEANUP REPORT GUIDANCE DOCUMENT
For
SPILLS OR RELEASES THAT IMPACT SOILS

REV: 2/07/2005

The Enforcement Division (ENFD) of the Montana Department of Environmental Quality (DEQ) oversees the cleanup of spills or releases of hazardous or deleterious substances that do not require long-term remediation. This guidance document was developed to aid consultants and responsible parties in providing ENFD with adequate cleanup reports (Reports) for spills or releases that impact soils. DEQ's Spill Management and Reporting Policy is available at: http://www.deq.mt.gov/enf/spill.asp.

ENFD applies DEQ's Tier 1, Risk-Based Corrective Action (RBCA), Risk-Based Screening Levels (RBSLs) when evaluating petroleum-impacted sites for closure. DEQ's RBCA document is available at: http://www.deq.mt.gov/rem/hwc/rbca/NewRBCA11-2003/Tier1Guidance10-03.pdf

It is recommended that the responsible party, authorized agent, or environmental consultant discuss the sample collection methodology or sampling plan with the ENFD site manager prior to initiating assessment or remedial activities. ENFD's main number is (406) 444-0379. It is recommended that all final reports be submitted to ENFD within 45 days of receiving the laboratory's final sample analytical data report.

ENFD applies the U.S. Environmental Protection Agency's Region IX Preliminary Remediation Goals to address spills or releases of other chemical (non-petroleum) products. The cleanup requirements of these spills or releases should be discussed with the ENFD site manager prior to initiating assessment or remedial activities.

At a minimum, the following information needs to be provided in Reports and submitted to ENFD so the site manager can evaluate compliance with applicable laws and rules and determine what further actions are warranted or if "no further action" is appropriate for the spill or release site.

Please note that other Department programs and other state agencies may have different requirements for their reports.

1. Introduction

The Report should provide a brief summary of events surrounding the incident that caused the release or spill, including a description of and the accurate volume of the material spilled or released, including a detailed description of how the volume lost was determined. The Report should also provide the name, mailing address, and telephone number of:

- The responsible party;
- The contact person if different than the responsible party;
- The person submitting the Report; and
- Any landowner whose property was impacted as a result of the release or spill.

2. Site Description

Provide an accurate description of the incident location. The following information should be provided:

- Incident site street address, city, and county where the incident is located. If the incident occurred on a highway, county road, etc., provide the road name and reference the nearest mile marker.

- Incident site Township, Range, Section, ¼, ¼ (TRS, ¼, ¼), including the name of the USGS 7.5-Minute Quadrangle map.

- Incident site latitude and longitude. The coordinates should be reported in decimal degrees and contain no more than five decimal places (e.g., 46.12345, –114.12345). A discussion on how the coordinates were acquired should be provided.

3. Site History

Provide a brief site history if the incident occurred at a residence, business or a facility. A site history isn't required if the incident occurred along a roadway or vacant field. However, a discussion on land use should be provided, e.g., ranching or agriculture operation, or if it is in an active oil field. If the incident occurred in an active oil field, provide the proper name of the oil field. To obtain this information, contact the Montana Oil and Gas Conservation Division at (406) 656-0040.

4. Hydrogeologic Conditions

a. Geology

Provide a discussion of site geology and bedrock conditions, including a description of geology encountered, i.e., soil and /or rock types, and lithology. If soil borings are installed, copies of all soil boring logs should be provided.

b. Hydrology

Provide a discussion of site-specific ground water and surface water information to the extent known. Include well depth, static water level, location, and use of any wells located in close proximity (1/4 mile) to the incident site location. The distance to the nearest surface water body and ground water well, regardless of use, should be provided. A discussion on surface gradient and assumed ground water flow direction should also be provided. Well logs are available at the Montana Bureau of Mines and Geology Ground Water Information Center website: http://mbmggwic.mtech.edu/

The depth to ground water is determined using the measured static water level in ground water wells located within 500 feet of the release or spill. If ground water data within 500 feet is unavailable, or it is extraordinarily difficult to find ground water information, describe the difficulty obtaining the information and apply the most conservative RBCA standard. Ground water information is not required if the most conservative RBCA RBSLs are applied to the site and residual contaminant concentrations do not exceed the RBSLs.

5. Assessment, Remedial, and Sampling Activities

Provide a detailed description of assessment and remedial activities, including the following:

- A description of the soil removal activities including the final dimensions of all excavations. If the depth of the excavation is greater than two feet, it is considered subsurface contamination and requires that the lateral, as well as the vertical, extent and magnitude of contamination be defined.

- A description of field screening methods, if applicable. The description should include:

    - Type, make and model of equipment used;

    - Calibration procedures used and type of calibration standard;

- Date and time of last calibration [Note: most field screening instruments should be calibrated daily and under the same ambient conditions where screening takes place]; and

- Method used and field screening results. If heated headspace is used as a field screening method, a description of the procedure is required. The field screening results should be presented in table form.

Field screening analysis is not adequate for site closure. Laboratory sample analysis is required and the sample analytical results, from a DEQ-approved laboratory, must be provided in the Report. The DEQ approved lab list is available at: http://www.deq.state.mt.us/LUST/downloadables/lablist/appvdlablist.pdf

- A description of sample collection activities, including the sample collection methodology, sample collection location, and the depth where each sample was collected. Please note that composite sampling is an acceptable method of soil sampling for diesel fuel and heavier petroleum hydrocarbon spills and releases. Compositing more than one sidewall is discouraged and composite sampling IS NOT acceptable for gasoline spills in most cases.

- A description of assessment activities to define the lateral and vertical extent and magnitude of contamination. ENFD uses 50 parts per million (PPM) total extractable hydrocarbons (TEH) as the investigatory limit when defining the extent and magnitude of petroleum hydrocarbon contamination, and the RBCA RBSLs for the concentrations of contamination that can be left in place.

- A description of contaminated soil disposal, including receipts identifying where and how much contaminated soil was disposed. Note: Petroleum-hydrocarbon contaminated soil is a Group II waste required to be disposed at a Class II landfill.

6. Sample Analytical Results

Provide a discussion of the laboratory analytical methods and of the sample analytical results. The sample analytical results should be summarized in a table that includes the sample identification number. The sample identification number should correspond to the sample identification number provided on the chain-of custody (CoC) and laboratory data report.

The complete laboratory analytical data package must be provided, including the CoC, sample receipt checklist or other document that provides the sample temperature when received at the laboratory. Samples that arrive at the laboratory with a sample temperature greater than 4^{o} C may result in ENFD invalidating the sample analytical data.

7. Summary

Provide a brief summary of assessment and remedial activities and a discussion of sample analytical results if the remaining petroleum hydrocarbon concentrations are greater than 50 PPM TEH or above the applicable RBSLs.

8. Conclusions and Recommendations

Provide conclusions based on sample analytical data in comparison with the applicable RBCA RBSLs. Provide recommendations for additional assessment or remedial activities or closure with a discussion and rationale for supporting the recommendations. The conclusion and recommendations should be based on sample analytical results, ground water information, or other site-specific information. If site closure is recommended, a justification must be provided to ENFD. Reporting that the petroleum hydrocarbon-impacted soils left in place are below RBCA RBSLs is not sufficient. The lateral and vertical extent of the contamination must be defined and the volume of impacted residual soils must be quantified.

9. Site Maps

The following types of maps should be provided in the Report:

a. A general site location map. The map can be a USGS 7.5 Minute Quadrangle map, road map, or an aerial photograph. All maps should have the incident location clearly identified. The Montana Natural Resource Information System website has topographic maps and aerial photographs available at: http://maps2.nris.state.mt.us/mapper/

b. A site map showing location of roads, buildings, waterways, etc. It is recommended that this map be drawn to scale. The location of the release or spill should be clearly identified on the site map. This map should include a north arrow, map scale, and all pertinent site features clearly labeled.

c. A sample collection location map. This map should show the excavation outline with approximate sample collection points identified and labeled with the corresponding sample identification number. The map does not have to be to scale, but the actual excavation dimensions should be provided.

d. A ground water elevation map (if applicable).

10. Photographs

The Report should contain a photographic log documenting assessment, remedial, and sampling activities. A description of the photograph and the direction (view) the photograph was taken is necessary. It is not required to provide copies of all photographs taken during remedial actions.

If you have any questions about this document, please contact DEQ's ENFD. The Report must be submitted to the ENFD site manager at the following address:

Enforcement Division
Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-0379; fax (406) 444-1923
http://www.deq.mt.gov/enf/contacts.asp